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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,421

05/05/2005

Hong Chen

131279-1039

4735

60148

7590

12/07/2009

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EXAMINER

MARCANTONI, PAUL D

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/07/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/534,421	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Paul Marcantoni	<b>Art Unit</b> 1793	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 35-39,41-45,50-55 and 60-73 is/are pending in the application.
- 4a) Of the above claim(s) 50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-39,41-45,51-55 and 60-73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 35-39,41-45,50-55 and 60-73 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/4/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

Applicant's arguments filed 11/4/09 have been fully considered but they are not persuasive.

The applicants' amendment of claims necessitated the following new grounds of rejection:

New Matter:

*Claims 35-39, 41-45, 51-55 and 60-73* are rejected under the first paragraph of 35 USC 112 and 35 USC 132 as the specification as originally filed does not provide support for the invention as is now claimed.

The term "crystalline" siliceous material added in claim 35 and throughout the pending claims is new matter. Applicants do not have support for any or all crystalline siliceous material but only specific crystalline siliceous materials including silica sand, quartzite dust, and activated silica, clay. The remaining would appear to be amorphous siliceous materials (see paragraph [0041] in PG PUB applicants' specification). Applicants thus only have literal support for those specific crystalline siliceous material but not every, any, or all crystalline siliceous materials they do not mention. There is no literal statement that any crystalline and/or amorphous siliceous material can be used to make calcium silicate hydrate. This is not a suggestion but only an observation.

The applicants newly underlined limitations in claim 35 ("any") combination of calcereous material, crystalline siliceous material, "semi-dry powder form", etc. would also appear to be new matter in claim 35 and throughout the claims.

Claim 36 is new matter due to "crystalline" as is claim 38 or any claim using the term crystalline.

Claim 42 is new matter because there is no support for "and mixtures thereof" but only one of the specific suspension agents at a time (see [0040] teaching the suspension agents of applicants' invention and notice no combination).

Claims 51 and 60 are new matter for same reasons given for claim 35.

The terms "any combination" is new matter in claim 63 as is the term "crystalline".

Claim 67 is new matter for same reasons as given in claim 42 (no support for mixtures or combinations thereof).

Again, all claims using crystalline (siliceous material) are new matter.

Obviousness Type Double Patenting:

Claims 35-39, 41-45, 51-55 and 60-73 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-34 of U.S. Patent No. 6,506,248 B1 (Duselis et al.) and claims 1-33 and 65 and 71-78 of US Patent No. 6,346,146 B1 (Duselis et al.) Both references method claims teach applicants' claimed invention. Although the conflicting claims are not identical, they are not patentably distinct from each other because both teach a method for making calcium silicate hydrate by mixing a calcerous source and a siliceous source under the appropriate conditions and do not rule out not mixing (physically agitating) but just adding the components together.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

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F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

35 USC 112 Second Paragraph:

Claims 35-39,41-45,51-55 and 60-73 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

The term "predetermined" remains indefinite in claim 35. Delete this term.

The term "little" agitation is not clear and vague. What does this mean? Is it light mixing or gentle mixing and for how long if at all?

The applicants have indicated both predetermined and little were removed as terms but they still remain in claim 35. It is assumed that little agitation means the same as --some agitation--- even if gentle agitation. It would appear that applicants are trying to say --essentially no agitation--- in claim 35 to indicate there could be some or no agitation. This is *not a suggestion* but only a review or observation of what applicants are trying to say in claim 35.

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35 USC 103:

Claims 35-39, 41-45, 51-55 and 60-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huttemann et al. '971, Kalousek '657, Helser '955 or '397, Nakano et al. '573, Kubo '324, or Oguri et al. '257.

All of the above cited references teach making calcium silicate hydrate by mixing a calcerous material with a siliceous material in a quantity. The prior art does not teach a predetermined quantity so thus the rejection under 35 USC 103 was made over 35 USC 102. It was not understood what applicants meant by predetermined quantity. *Further, the crux of applicants invention appears to be that the formation reaction of calcium silicate hydrate between the calcerous source and the siliceous source takes place with little or no agitation (see claim 35).* More particularly, it seems "no agitation" as indicated in independent claims 51 and 60. The term "little agitation" is not completely understood either as applicants do not define what constitutes "little agitation". It would appear that applicants mean lightly or gently mixing but it is not clear (as opposed to vigorously stirring or agitating).

Hutteman '971 teaches mixing a calcerous and siliceous source to make calcium silicate hydrate (see claims) and does not even mention that these components must be agitated in any way but only physically be added together or mixed with one another (not necessarily with a mixing device). Also note that, for example, mixing will occur even upon transport in a tube or pipe or even in a container just by the turbulent action of the two ingredients together.

Kalousek '657 teaches making a calcium silicate hydrate by mixing a calcerous and siliceous source in Example I and notes that the mixture can undergo "mild" (ie little) mixing or may be hand mixed by using a wooden paddle. Note again that Kalousek does not say it "must" be hand mixed gently or mildly but that it may be mixed in this manner. It would have been also obvious for one of ordinary skill in the art to simply not mix with a wooden paddle at all and just let the mixture form the gel without mixing (see Example I, col.3, lines 1-20).

Helser teaches making a calcium silicate hydrate by mixing a calcerous source and a siliceous source and he does not require any agitation of the two components prior to forming the gel thus meeting applicants' claim limitations (See claims for both Helser references).

Nakano et al. likewise teaches mixing the same components but not agitating to form the gel which becomes calcium silicate hydrate (see claims).

Kubo '324 also teaches making hydrous calcium silicate hydrate by mixing a calcerous and siliceous source and notes that "although the continuous stirring is desirable, the system may be stirred intermittently insofar as the production of the hardened mass is prevented. It would appear Kubo is saying that stirring is not required to form the end product thus meeting applicants limitation (negative) of little or no agitation (ie stirring).

Oguri et al. '257 teach a process for making calcium silicate hydrate by mixing a calcerous source and a siliceous source and in his claims he does not require agitation of the components but only that they be added together for a reaction (see claims).

Response:

Applicants indicated they wish to hold the ODP in abeyance pending the outcome of other issues such as other rejections. In rebuttal, applicants did not provide a proper terminal disclaimer (though they appear they may do so) so the ODP rejection remains.

The examiner also notes that there are only residual issues under 35 USC 112 second paragraph with respect to *predetermined* and the term *little* in claim 35 which should be easily resolved by removing.

The examiner has also carefully reviewed applicants remarks and response and has removed numerous references especially those which no longer meet their claim limitations with respect to crystalline siliceous material. Many references removed only taught diatomaceous earth which is amorphous only. However, one reference did teach "tripoli" which is still a crystalline source of silica and not amorphous.

The examiner has also reviewed the other arguments relating to these references yet it appears that the change in sequence of adding ingredients does not teach away from the prior art rendering applicants' invention prima facie obvious to one of ordinary skill in the art. All teach making calcium silicate hydrate. Further, all teach the same materials which applicants claim as a gel forming agent (which are amorphous silica sources) and little agitation has been interpreted to still mean agitation or some agitation (as opposed to no agitation). It is further noted that one of ordinary skill in the art would have understood the final product could be formed into a powder or a specific



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shape such as a brick or block depending upon the desired end use. It merely requires setting the powder into a set form.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Paul Marcantoni/  
Primary Examiner, Art Unit 1793